Comparison of musculoskeletal disorders (MSDs) in military versus civilian workers of the ministry of defense of spain

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Background

Work-related Musculoskeletal Disorders (MSDs) impact on workers:

- Safety & health
- Functional ability
- Sick-leave

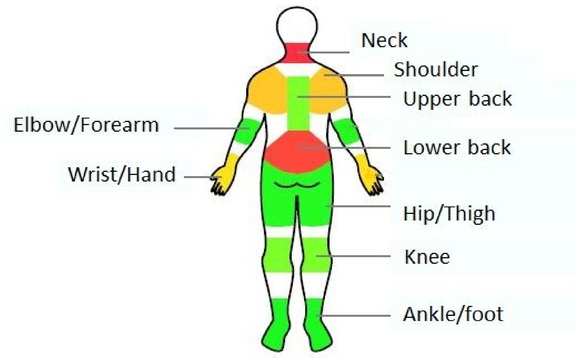
Injury incidence: military > general population

Purpose

To compare proportions of self-reported MSDs between military and civilian workers of the central headquarters of the Ministry of Defense of Spain.

Materials and Methods

Study sample: 100 participants (n= 50 military; n=50 civilian, (50% each gender) completed validated Spanish version of standardised Kuorinka Nordic Questionnaire.



Adapted from: Kuorinka (1987)

Ethics Approval Institution:
Hospital Central de la Defensa "Gómez Ulla" (Madrid, Spain).

Results

1 Symptoms (last 12 months)

Cervical Region

	♂ (n = 50)	♀ (n = 50)
Military	10 (40%)	21 (84%)
Civilian	15 (60%)	20 (80%)

Dorsolumbar Region

	♂ (n = 50)	♀ (n = 50)
Military	15 (60%)	18 (72%)
Civilian	11 (44%)	21 (84%)

Shoulder Region

	♂ (n=50)	♀ (n = 50)
Military	8 (32%)	13 (52%)
Civilian	10 (40%)	16 (64%)

2 Predominant duration of symptoms/body region (last 12 m)

	♂ (n=50)		♀ (n = 50)	
Military	50%	Cervical: 1-7 days Shoulder: >30 non-consecutive days	44.4%	Dorsolumbar: > 30 non-consecutive days
Civilian	45.5%	Dorsolumbar: 8-30 days	40%	Cervical: > 30 non-consecutive days

3 Main symptomatic body area preventing from work (last 12 m)

	♂ (n=50)		♀ (n = 50)	
Military	6.7%	Dorsolumbar	16.8%	Dorsolumbar
Civilian	25%	Dorsolumbar	10%	Cervical

Contact details

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Conclusions

- The three most common symptom sites reported for military and civilian personnel were the same, with no statistical differences across both populations ($p>0.05$).
- Female personnel represented a greater proportion of results in all three main body regions ($p<0.05$) when compared to male personnel.
  - Female personnel are known to more likely report an injury.
- While reported symptoms for the cervical and shoulder regions were higher in the civilian population, military personnel reported higher rates of longer lasting MSDs episodes than their civilian counterparts.
  - Underreporting of minor injuries is common in the military.
- The spinal region, notably the dorsolumbar, was the main symptomatic site preventing from work.

Recommendations

- Identification of factors leading to the higher representation of female personnel reporting symptoms.
- Improve reporting of minor injuries for military personnel.
- Risk mitigation strategies targeting the spinal and shoulder regions (e.g., workplace ergonomics) be investigated and trialled.

References

Kuorinka I, Jonsson B, Kilbom A, et al. *Standardised Nordic Questionnaire for the analysis of musculoskeletal symptoms*. Appl Ergon 1987;18:233-237.

Pope R, Orr R. *Incidence rates for work health and safety incidents and injuries in Australian Army Reserve vs full time soldiers, and a comparison of reporting systems.* Journal of Military and Veteran's Health 2017; 25:16-25.

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